Using Play to Facilitate Motor Skill Development of Children with Cerebral Palsy in Mexico

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Abstract

Play is at the center of pediatric occupational therapy, giving children the opportunity to explore and learn from the environment and acquire skills (Parham & Fazio, 2008). Children with cerebral palsy (CP) may have impaired motor skills that require additional support to play and learn (Missiuna, Polatajko, Pollock, & Cameron, 2012). Padres y Compadres is a cooperative clinic in Mazatlan, Mexico that serves children with CP. Several times a year, student volunteers travel to Mexico with Push International to work with these children, who would benefit from a program that incorporates both play and motor skill development into their daily routines. Through the use of a reference guide and 45 play activity cards, student volunteers will help promote culturally relevant, age-appropriate play as a way to support motor development of children with CP at Padres y Compadres.

No other activity that we know of enables handicapped [sic] children to acquire a similar

> sense of control over their world. If play is to serve the growth needs of the deficit child, it requires continuous structuring and skillful enrichment of the environment (Michelman, 1974, p. 157).

Introduction

Play is an occupation of childhood. The Occupational Therapy Practice Framework Second Edition (OTPF-II) includes play within the field's domain of practice. Through play, children can improve performance skills (sensory perceptual, motor and praxis, emotional regulation, cognitive, communication, and social skills) in a functional way, thereby increasing their occupational participation (American Occupational Therapy Association [AOTA], 2008).

In January 2013, the authors of this paper had the opportunity to travel to Mazatlan, Mexico, with Push International, to work with the staff, caregivers and children at Padres y Compadres. Padres y Compadres is a cooperative clinic attempting to bridge the gap of available services for children with disabilities in Mexico. The organization aims to provide children with cerebral palsy (CP) and other disabilities with a better quality of life. Padres y Compadres strives to incorporate innovative, evidence-based practice into their services (Asociación de Padres y Compadres, 2013). One purpose of the trip, in January 2013, was to educate staff and caregivers at Padres y Compadres about safe body mechanics when transferring their children. The program was well received and solidified an opportunity for future collaboration between Padres y Compadres and Push International volunteers.

During the trip, the authors observed the lack of play opportunities provided to the children, and a general sense of disinterest, despair, and disengagement in therapy and daily activities. Sebastian, a six-year-old boy with CP-like symptoms, held a rattle for the first time in an occupational therapy session. The staff and Sebastian's mother were able to witness his

increased motivation and participation because of this novel play activity. He went from hesitant and non-participatory to smiling and engaged. The power of play was also highlighted by Yeme, an eight-year old, who through nonverbal communication directed students to ride a "play" horse. During occupational therapy treatment sessions, we saw play used as a motivator and a therapeutic medium. However, as first year occupational therapy students, we had a very minimal knowledge base of play and struggled to select age-appropriate play activities and toys that would both motivate the children and target specific skills.

Push International volunteers receive all necessary training while in Mexico through in-services. Currently, Push International provides an in-service to all volunteers titled "Wheelchairs 101," in which the volunteers learn the parts of a wheelchair and how to adapt wheelchairs to an individual. However, there was not an in-service on the use of play while working with children. An in-service was needed to help student volunteers understand the benefits of and facilitate play with the children at Padres y Compadres, while simultaneously promoting motor skill development of the children, desired by the caregivers and staff.

Background Information

Play and Playfulness

Play promotes emotional, cognitive, language, and physical development (Sheridan, 2011). Play can take various forms, resulting in several different definitions of play, but each definition contains similar concepts: freedom from constraint, enjoyable, and fun. Parham and Fazio (2008) define play as "any spontaneous or organized activity that provides enjoyment, entertainment, amusement, or diversion" (p. 448). AOTA uses Parham and Fazio's definition of play in the OTPF-II (AOTA, 2008). Another definition of play provided by Kuhaneck, Spitzer, and Miller (2010) is, "any activity freely entered into that is fun or enjoyable and that is

appropriately matched to one's skill to represent an attainable challenge" (p. 6). A third definition, which is broad, is that play is any fun activity that produces a sense of joy in the participant (Bundy, 2012). Additionally, Chiarello, Huntington, and Bundy (2006) define play as "a naturally occurring situation during which children learn and develop new skills" (p. 131). While there are similar concepts across these definitions, they highlight the complexity of play and the need to be cautious when comparing research studies on play. Another concept that must be considered when comparing definitions of play is playfulness.

Playfulness is the expression of play during an activity (Bundy, 1997). Examples of playfulness include teasing and joking during an activity, and having an imaginary friend. A multifaceted construct, playfulness, is influenced by the fit between a child and caregiver, as well as the child and physical environment, and the child and activity (Cameron et al., 2001; Chiarello et al., 2006). Playfulness is a way to measure and operationalize play. The play-nonplay continuum consists of four elements: intrinsic motivation, internal control, freedom to suspend reality, and the transaction being framed, meaning the context in which the play interaction takes place (Skard & Bundy, 2008). These four elements interact and contribute to the playfulness of a child. Children who have sufficient internal control can decide the parameters of play on their own. However, children with disabilities may lack this internal control, but caregivers' actions and adaptations can compensate for the constraints imposed by a disability and allow the child to engage in playfulness (Bundy, 2012).

To evaluate a child's playfulness, Bundy (1997) developed the Test of Playfulness (ToP). The ToP is an observational assessment tool for children 6-months to 18-years-old, which consists of 29 items, and is used to assess intrinsic motivation, internal control, freedom to suspend reality, and the transaction being framed (Bundy, 2012). The ToP has been used to

observe children with different diagnoses (Chiarello et al., 2006; Okimoto, Bundy, & Hanzlik, 2000), and children in different cultural groups (Griffith, 2000). Cameron et al. (2001) found that the ToP provided clinicians with a fuller view of a child's abilities, specifically insights into strengths, as well as a holistic framework of play. In addition, children's ToP scores are not linked to their motor skills; children with limited motor skills may score high on the ToP and children with adequate motor skills may score low on the ToP (Cameron et al., 2001). However, Chiarello et al. (2006) found that, "as cognitive and motor abilities increased, children's playfulness increased" (p. 146). Therefore, cognitive and motor abilities, as well as the personality of a child, influence a child's playfulness.

In addition to playfulness and different definitions of play, there are various ways to categorize play. As children develop, the type of play they engage in evolves (Bergen, 1988). Takata (1974) developed a series of play epochs as a way to artificially group and distinguish play activities, corresponding with typical developmental ages and existing on a continuum. These epochs were derived from ideas and concepts based on the work of Piaget, Erikson, and Florey, and are intended to provide a way to analyze play behaviors alongside development. The epochs are general estimations of time periods in which typically developing children may engage in a specific type of play (Takata, 1974). Takata's (1974) play epoch categories include: sensorimotor (birth to 2-years-old), symbolic and simple constructive (2 to 4-years-old), dramatic, complex constructive, and pre-game (4 to 7-years-old), game (7 to 12-years-old), and recreation (12 to 16-years-old).

Within the sensorimotor play epoch, children are interested in play that involves engaging the various sensations. This play epoch is characterized by repetition of actions, exploration of cause and effect, and solitary play – meaning the child plays alone. The next

epoch, a more complex form of play, is the symbolic and simple constructive type, which is entered into as other skills emerge, such as language, mobility, and manual dexterity. Pretend play is associated with this epoch and children may engage in similar activities alongside one another, but without interaction, known as parallel play. Following this play epoch, children enter into the dramatic, complex constructive, and pre-game epoch, which involves role-playing and reality-based imaginative play. Other characteristics of this epoch include locomotion, action and novelty, as children participate in associative play, which adds a component of social engagement. Proceeding this epoch is the game epoch, in which children are interested in games with rules, cooperating with friends, speed, coordination, and formal organizations. This play epoch involves cooperative play, in which children work together on a common play activity. Finally, the recreation epoch is characterized by the continuation of mastery of previously learned skills through play, respect for rules, teamwork, and competitiveness. Like the game epoch, the recreation epoch involves cooperative play with peers (Takata, 1974). These epochs give researchers, program developers, and caregivers the ability to understand and label the complex behaviors of play, and provide age-appropriate play activities for children.

Caregivers, and other play partners, can affect a child's play, along with the abilities of the child and cultural environment (Stevenson, 1989). Caregiver and cultural expectations are critical to a child's development and play routines. The duration of a play activity increases when a child's mother attends to a typically developing child, even when the attention is brief or only involves looking at a plaything (Dunn & Wooding, 1977). A plaything, such as a toy, is a part of play that can facilitate the development of functional skills for children. A toy as simple as a rattle can provide the foundation for development of functional skills, such as dressing and feeding one's self, by promoting learning through the use of one's hands (Riddick, 1982). There

are hundreds of store-bought toys and just as many toys that can be made out of common household objects. There are many properties of toys: heaviness, texture, sound, instability, shape, color, and moveable parts, which are important to take into consideration for children at different cognitive and motor levels (Greaves, Imms, Krumlinde-Sundholm, Dodd, & Eliasson, 2012). As the "supplier" of toys and "controller" of the environment, a caregiver can have a profound impact on the interest and motivation a child shows in a play activity, or in the ability to participate in a play activity. Caregivers may turn to occupational therapists to support the growth, development, and participation of their children.

The role of play in occupational therapy. Occupational therapy promotes "health and participation in life through engagement in occupations" (AOTA, 2008, p. 626). Occupations include all activities that an individual does throughout a day that are necessary and/or meaningful to that person (AOTA, 2008). Occupational therapists work with individuals of all ages and with various disabilities to facilitate engagement in occupations. Play is one of eight occupations identified by the OTPF-II, and can be used as a hands-on or occupation-based intervention. It may also be a central focus of program development for pediatric clients. Play is an integral component of pediatric occupational therapy (Bundy, 2012; Parham & Fazio, 2008).

Occupational therapists may provide education to caregivers regarding the development of play in a child with a disability. An occupational therapist may also assist caregivers in selecting developmentally appropriate toys for children to further facilitate growth (Muñoz, 1986). The intent is for a toy to challenge the child's interest at his/her skill level and ability (Goldberg & Peters, 2005). For example, a two year old with some gross motor skills but limited fine motor skills may benefit from playing with a shape sorter.

Play is a component of the entire pediatric occupational therapy process, including

evaluation, intervention, and outcomes. There are numerous occupational therapy assessments that examine play skills and the playfulness of children (Bundy, 2012; Kuhaneck et al., 2010; Mulligan, 2003)**,** such as the ToP (Bundy, 1997) and the Revised Knox Preschool Play Scale (Knox, 2008). In a survey of 222 pediatric occupational therapists, Couch, Deitz, and Kanny (1998) found that 91% of therapists responded that play is very important to motivate a child to participate in therapy (and no therapist responded that play is not important). Couch et al. (1998) wrote, "play is used as a modality to elicit motor, sensory, or psychosocial outcomes" (p. 113). During occupational therapy interventions, play may be used as a means to achieve individualized goals or play participation may be the child's end goal.

Impact of disability on play. A physical disability may influence how, when, where, and what a child plays. Bly (1994) stated, "therapeutic intervention must be geared to enhancing the infant's motor skills – for the purpose of exploration, discovery, and learning" (p. 225); exploration, discovery, and learning are components and results of play. Although play is difficult to generalize for children with disabilities, one commonality is that children with disabilities cannot interact with their environment in the same way as typically developing children (Mogford, 1977). Additionally, the severity of the disability determines the impact on play participation (Rogers, 1988). Through the use of daily activities, such as eating, sleeping, and play, motor development of children with disabilities is promoted (Pocono, 1992). Schaaf and Burke (1997) wrote, "play is like a food for the nervous system" (p. 82). As play enhances the capabilities of the nervous system, children learn to interact with their environment on a more complex level (Schaaf & Burke, 1997). A disability may change how a child interacts with his/her environment and therefore how he/she plays.

Kuhaneck et al. (2010) found that "there is little literature on the play of children with

disabilities compared with the enormous body of work on typical play development" (p. 17). In a literature review of toys that promote the use of both hands, Greaves et al. (2012) found no studies that included children with unilateral CP. This reflects the lack of evidence regarding how play is developed in children with disabilities.

There are, however, studies which compare the playfulness of children with disabilities to the playfulness of their "typically" developing peers (Bundy, Shia, Qi, & Miller, 2007; Morrison, Bundy, & Fisher, 1991; Okimoto et al., 2000). In a study of 38 children, half with CP and developmental delay and half typically developing, Okimoto et al. (2000) found that the children with CP and developmental delay scored significantly lower on the ToP than typically developing children. Improvements in scores on the ToP for children with CP and developmental delay were found to be statistically significant from pretest to posttest, when mothers were given an intervention that specifically addressed concerns and modeled verbal and nonverbal behaviors (Okimoto et al., 2000). Therefore, playfulness in children with disabilities can change as a result of interventions. However, a child's opportunity to participate in interventions is dependent upon caregivers and other external factors.

Studies of children who lack the opportunity to participate in play experiences provide insight into the impact of play deprivation (Kaler & Freeman, 1994; Missiuna & Pollock, 1991; Taneja et al., 2002). Play deprivation may be due to disability or lack of environmental support, such as in an orphanage. Secondary disabilities, such as lack of initiation, over dependence on caregivers, or poor social skills, may be the results of diminished participation in play (Missiuna & Pollock, 1991). Riddick (1982) noted, "something that starts out as a physical disability can also affect a child's intellectual development because his chances to explore his environment and actively test out situations and try out ideas are limited" (p. 2). Therefore, the lack of an

opportunity to play may result in a secondary disability (Missiuna & Pollock, 1991).

Children who lack an opportunity to play on a daily basis can achieve motor and developmental gains after participating in play sessions. In a longitudinal study of 19 children, 6 to 30-months-old, at an Indian orphanage, Taneja et al. (2002) found that 90-minute play sessions increased children's independence. The play sessions consisted of cognitive, motor, and language stimulation activities. The Motor Quotient of the Bayley Scale of Infant Development adapted for India increased by 18 points ($p<0.0001$) for these children (Taneja et al., 2002). Taneja et al. showed that play can fit into the routine care of children where environmental support is limited; and the effects of regular play may lead to motor development gains, such as better head and body control. This study reiterates that, with proper support for participation, play is a motivating way for children with disabilities to develop motor skills and enhance overall development.

Motor Development

In the OTPF-II, AOTA (2008) categorizes motor skills under the umbrella of performance skills, which are a person's ability to perform an action. As children grow, they reach various developmental milestones that allow them to perform more complex actions. Other categories under performance skills are praxis, sensory-perceptual, emotional regulation, cognitive, communication, and social skills, which are all interrelated, and are used together to perform an occupation (AOTA, 2008). Therefore, a delay in one or more of the occupational performance skills will affect acquisition of other performance skills. Motor development can impact social/emotional, cognitive, and language developmental milestones (Alexander, Boehme, & Cupps, 1993). Therefore, facilitating motor skill development through play may have a global effect on overall development.

A disturbance in motor development may limit future skills. For example, if a child is not able to bear weight on his/her forearms, then his/her shoulder girdle control may be impaired, resulting in limited reaching ability (Bly, 1994). Positioning a child is important for motor skill development and optimal engagement (Bly, 1994; Mogford, 1977). It can prevent atypical postures and movement patterns. Correct positioning of a child may increase body awareness, promote environmental exploration, and facilitate the development of functional movements. In early infancy, children start to move with proper stability, which facilitates acquisition of motor skills. Beneficial positions for a children include prone, sidelying, supine, and sitting. The prone position is especially important because it promotes weight bearing on the arms, as well as head control. The sidelying position can be useful for a child with low mobility. The supine position allows for visual stimulation, and sitting promotes head control and holding one's body up against gravity. Appropriate positioning during play activities allows for a greater interaction with objects and people, and in turn can lead to increased motor development (Pocono, 1992). Positioning can help counteract the impact a disability may have on motor development, and therefore, promote skill acquisition through play.

Motor development occurs in sequence (Passer & Smith, 2009). A typical developmental pattern is the acquisition of gross motor skills, followed by fine motor skills. Additionally, motor development occurs "proximal to distal, mass to specific, ulnar to radial, and more asymmetrical patterns to symmetrical patterns" (Mulligan, 2003, p. 130). A basic gross motor sequence is an infant's ability to hold his/her head up when prone, to rolling over, to sitting upright without support, to standing with support, to pulling up to stand, to standing without support, and finally to walking independently (Passer & Smith, 2009). Motor skills are acquired based on underlying body functions and structures (AOTA, 2008). Reaching motor milestones is important because

they translate into function. Achievement of each milestone occurs within an expected age range for a typically developing child. However, not all typically developing children reach these milestones at the anticipated time (Passer & Smith, 2009); and for children with CP the timeframe may be even more variable (Centers for Disease Control and Prevention, May 18, 2012, "Early Signs," para. 1).

Neuromotor Dysfunction

Neuromotor disorders are the result of "damage or dysfunction that affects the brain, spinal cord, muscles, and/or the links between them" (Missiuna, Polatajko, Pollock, & Cameron, 2012, p. 461). The dysfunction is either present at birth or acquired early on in one's life. Common neuromotor disorders include spina bifida, muscular dystrophy, spinal muscular atrophy, developmental coordination disorder, and CP. All neuromotor disorders result in motor impairments that impact one's daily occupations; however, the level of involvement varies greatly. Comorbidities, such as developmental conditions related to attention, language, and cognition, are common among children with neuromotor disorders (Missiuna et al., 2012). The following section will focus on the details of CP and the impact that it has on a child's development of motor function through play.

Cerebral palsy. CP is a non-progressive disorder that is caused by a lesion in the brain, prior to 2-years of age. The disorder causes impairments of postural and voluntary movements, and may also involve speech, vision, hearing, and perceptual impairments. Although the damage to the brain does not worsen over time, motor impairments become more apparent and have a greater impact on functioning as a child ages (Glanzman, 2009). Comorbidities may be present including autism, epilepsy, intellectual disability, visual, and hearing deficits, hydrocephalus, microcephaly, scoliosis, and hip dislocation (Glanzman, 2009; Kirby et al., 2011). CP may

impact client factors such as muscle and movement functions, which can impact performance skills. Some skills that may be impaired include posture, mobility, coordination, strength, effort, and energy (Bowyer & Cahill, 2009).

CP can be categorized by body parts affected, the quality of motor movement related to muscle tone, and the level of functional skills present. CP can be classified as diplegia, hemiplegia, or quadriplegia. Diplegia includes involvement of the lower extremities, whereas hemiplegia includes involvement of one upper extremity and one lower extremity on the same side. Quadriplegia includes involvement of both upper and lower extremities, and can also include the trunk (Bowyer & Cahill, 2009). CP can further be categorized by the type of muscle tone reflecting the quality of movements. The muscle tone categories are spastic, athetoid, ataxic, hypotonic, and mixed. Tight, rigid muscles are said to be spastic or high tone. Muscle tone that varies and includes writhing movements is athetoid. Intentional movements that appear uncoordinated are ataxic. Loose muscles are classified as hypotonic or low tone. Finally, mixed includes characteristics of two or more of the other muscle tone categories (Bowyer & Cahill, 2009). The body parts involved and the type of muscle tone contribute to the third way to classify CP, which is by function, such as the ability to manipulate objects, sit up, or ambulate. The two systems that may be used to classify functional involvement are the Manual Ability Classification System (MACS) and the Gross Motor Function Classification System (GMFCS) (Bower & Cahill, 2009). The MACS focuses on ranking a child's ability to handle objects, emphasizing functional tasks (Eliasson, et al., 2006); whereas the GMFCS classifies the functional ability of a child to move and walk (Missiuna et al., 2012; Palisano et al., 1997).

Two research studies have explored the patterns of motor development in children with CP. Rosenbaum et al. (2002) analyzed 2,632 Gross Motor Function Measure 66 (GMFM-66)

assessments, of 657 children, to determine if the GMFM-66 score and age can predict future gross motor function. The assessments took place over four years and children were between 1-year and 13-years-old at the start of the study. Five distinct patterns of motor development emerged, which can be used to plan interventions and monitor progress. Additionally, Rosenbaum et al. found that "children, on average, reach about 90% of their motor function (as measured by the GMFM-66) by around age 5-years-old or younger, depending on their GMFCS level" (p. 1362). This study underscores the importance of early intervention for children with CP. Hanna et al. (2009) analyzed 3,455 GMFM-66 scores of 657 children, 2-years to 21-years-old, to determine if there were motor losses among adolescents. This study, which took place over nine years, found that there were functional declines, which were clinically significant in children with the lowest GMFM-66 scores. This highlights that children with the most involved CP are at risk for losing motor function, while there are fewer motor function declines for children with higher levels of motor abilities. Based on this study, one might hypothesize that children at Padres y Compadres with the most involved CP may be the most at risk of losing motor function over time, and that play-based intervention may be one way to counteract this decline.

Children in Mexico

While research on the topics of play, motor development, and CP are necessary and useful, it is important to consider these topics within the cultural context. Although available research on these topics specific to Mexico is limited, some differences have been noted between children in the United States and Mexico. The following sections will consider typical motor development of Mexican children, attitudes and expectations surrounding Mexican children with disabilities, and the typical play of children in Mexico. Additionally, cultural considerations and

services available to children with disabilities, in Mexico, will be explored.

Motor development. In southeastern Mexico, Brazelton, Robey, and Collier (1969/1973) found that the acquisition of developmental milestones of 93 healthy Zinacanteco Indians, ranging in age from birth to 9-months-old, followed similar stages of development to North American infants. The researchers observed that the infants were swaddled for most of the first year of their lives, without the opportunity to play and explore their environment. During this time, the mothers, siblings and other family members held the children a significant amount of time (LeVine, Miller, Richman, & LeVine, 1996). Brazelton et al. noted that unlike North American mothers, mothers of the Zinacanteco children did not stress development of motor skills during the first year of life. The children in this study lagged behind typically developing North American infants, in terms of motor and mental development, by about one month (Brazelton et al., 1969/1973). This study shows that child rearing practices may vary from culture to culture, and the development of a child, specifically his/her motor skill acquisition, may initially be impacted.

Children with disabilities. There is limited research on children with disabilities in Mexico. Poblano, Arteaga, and Garcia-Sánchez, (2009) conducted a systematic review of published papers documenting the prevalence of early neurodevelopment disabilities in Mexico and found no data on the prevalence of CP. In the U.S., 2 or 3 children out of 1,000 are diagnosed with CP (Bowyer & Cahill, 2009), and spastic CP is the most common type diagnosed (Missiuna et al., 2012). In India and China, the prevalence rate of CP is 2 to 2.8 children per 1,000. However, it may be difficult to acquire statistics on the prevalence of CP and neurological impairments in areas with poor resources (Gladstone, 2010). The prevalence rate in Mexico is likely to be 2 or 3 children out of 1,000, based on the prevalence rates for other countries.

While research on children with disabilities in Mexico is limited, one study was done on Mexican parents and their children with disabilities. Bauman (2009) found that Mexican parents tend to overprotect their child with a disability and underestimate his/her skills. The main caretaker for a child with a disability is often the mother. Commonly, a mother will focus her attention on the child with a disability, and is less involved with the rest of the family. Mexican parents rely on health professionals to tell them necessary information regarding their children. The parents in this study reported that they wanted as much independence for their children as possible, and for their children to develop skills to feed and bathe themselves (Bauman, 2009).

Play in Mexico. Family expectations, as well as culture, influence a child's play; therefore, play should be considered within the context of culture. Cultural norms must be considered when working with children to enhance the therapeutic relationship between the child and therapist (Glover, 1999). Bloch and Pellegrini (1989) wrote, "play, as a dominant activity of children in all cultures, is seen as an activity that both affects and is affected by cultural influences . . . as an important context in which interaction and learning crucial to child development occur, and as an indicator and expression of child development" (p. 2). There is a dearth of information on play specific to children in Mexico. However, based on the research available, some patterns have been noted.

In Juxtlahuaca, Mexico, children over the age of 6-years-old were observed to play games with rules; girls especially were observed in role-play and creative-constructive play; however, no fantasy play was observed (Edwards, 2000). Likewise, Brazelton et al. (1969/1973) did not observe fantasy play during a study of Zinacanteco children, in southeastern Mexico, but children as young as 4-years-old were observed to participate in play activities that imitated adult tasks. Imitation was found to be the most common type of play, and primary means of learning

among the Zinacanteco children (Brazelton et al., 1969/1973). Similarly, Gaskin (2000), who conducted a study of 60 typically developing children, birth to 17 years-old, over a 20 year period in a Mayan village in Yucatan, Mexico, noted the tendency of Mayan children, 6 to 11-years-old, to participate in organized play with roles related to adult life such as playing house, hunting, and driving. For younger Mayan children, birth to 5-years-old, the most common types of play were manipulative object play and large motor play, while pretend play and symbolic play were rare (Gaskins, 2000). Other common play activities may include dressing up in clothing that reflects Mexican culture, such as a quinceñera dress or charro hat, playing with musical instruments like maracas, tambourines, rain sticks, and guitars, and outdoor play, such as hopscotch and soccer (Kranz, Ramirez, Flores-Torres, & Steele, 2005). Manipulative play activities suggested by Garcia and Torrijos, along with Pettit and Pettit, include balero (cup attached by a string to a stick), checkers, yo-yos, loteria (picture bingo), tic-tac-toe, cars, dominos, spinning tops, and hand puppets (as cited in Kranz et al., 2005; Martinez, 2002). As children age, the type of play that they participate in changes, and so does the duration of time spent playing.

Gaskins (2000) observed that Mayan children aged birth to 2-years-old spent about 25% of their time playing, and children 2 to 5-years-old spent about 40% of their time playing. From 6 to 8-years-old, time spent playing decreased back to about 25% (Gaskins, 2000). This could be because by 6 or 7-years-old, children are expected to have household duties and responsibilities (Brazelton et al., 1969/1973; Gaskins, 2000). Time spent on play continued to decline beyond 7-years-old, and by 17-years-old, Mayan children only spent 5% of their time on play activities, while over half of their time was spent on work (Gaskins, 2000). Work, and the value of work, are an important cultural determinants for the engagement in play.

There are three main cultural principles that influence Mayan children's activities: adult work is a priority, the parent's beliefs shape the child's world, and children are independent to decide what to do, when they are not engaged in adult-directed activities (Gaskins, 2000). Edwards (2000) found that "adults did not stimulate or encourage play, but they were tolerant and not critical" (p. 332). Similarly, Gaskins (2000) observed that Mayan parents valued play because it "allows adults to get their work done and because it is evidence that the child is not sick" (p. 385). The observations of Gaskins and Edwards challenge the belief that a child's occupation is play and that play is independent from other daily activities. Therefore, this project focused on play as a tool to promote motor development, rather than as an occupation, in order to provide culturally competent care.

Cultural considerations. The model of care developed by Campinha-Bacote (2002) to deliver culturally competent care in nursing can also be applied to working at Padres y Compadres. The model stresses that cultural competency is an ongoing development of cultural knowledge, cultural ability, cultural experiences, and cultural self-awareness. Additionally, Campinha-Bacote stated that "there is more variation within ethnic groups than across ethnic groups" (p. 181), which is important to remember when developing cultural knowledge. In order to encourage ongoing development, one must be self-aware, and always willing to ask questions to gain more cultural competence.

When working with Latin American individuals, Arrendondo and Microtraining Associates (1994) recommend never making assumptions, learning about specific cultures, and accepting cultural values. Arrendondo and Microtraining Associates detailed generalizations of the Latino culture, which are that family comes before self, "ganas," or desire, is mixed with enthusiasm and determination, and authority is respected (individuals defer to older males and

people in authority positions). Values that may conflict between Anglo and Latino cultures include individual vs. collective focus, orientation to time, and expectations for child development especially around gaining independence. Caregiver roles, responsibilities, and expectations may be different especially around dressing. In Latino cultures, it may be believed that the cause of a disability is the result of a punishment from God, evil (such as a hex or curse), or simply that it is a natural part of life consisting of good and bad (Zuniga, 1997). It is important to have a clear understanding of the values and beliefs of the population one is working with, and to recognize that values and beliefs may vary greatly across, and within cultures.

Services available for children with disabilities. There are a lack of opportunities for children with disabilities to receive services in Mexico. The Comisión Mexicana de Defensa y Promoción de los Derechos Humanos (CMDPDH) and Disability Rights International (DRI) conducted a one year investigation, from August 2009 through September 2010, at institutions in the Federal District, the State of Veracruz, Xalapa, and Oaxaca, Mexico, serving children and adults with disabilities. The investigation brought to light the lack of community services available for people with disabilities in Mexico, which often resulted in a lifetime of institutionalization. It was found that families did not have the necessary support to raise a child with a disability, even with minor disabilities like cleft palate, and often the only option was to put the child in an institution (Disability Rights International [DRI], 2010).

Disability Rights International (2010) found that services available for children with disabilities are understaffed, and development of a secondary disability is a major concern. It was observed that staff members caring for children with CP at one site were not aware of techniques to prevent “degeneration of children into further disability” (DRI, 2010, p. 23). Nelson and Rubi (1999) also found that it is common for children with disabilities, in Mexico, to be cared for by

an untrained individual. DRI investigator Fraternidad sin Fronteras noted:

> There were almost two dozen children with disabilities sitting on mats on the floor or on benches in total inactivity, practically motionless. Some were covered in blankets. Some sat staring at the walls. A few sat rocking back and forth or biting their fingers. Staff just looked on (DRI, 2010, p. 21).

Disability Rights International (2010) noted that this inactivity is a major concern. Children with physical disabilities require "constant care so that on a neurologic level their brains will develop healthy movement patterns and on a physical level, they will develop the muscle tone and bone for actual movement" (DRI, 2010, p. 22). DRI suggests that along with basic necessities, like feeding and sleeping, children with physical disabilities require therapy, play, psychosocial, and family support as part of their care plan. However, most institutions in Mexico are unable to meet these needs (DRI, 2010).

Padres y Compadres and Push International. Established in 1993, the mission of Padres y Compadres is to provide training for mothers of children with disabilities, and to encourage mothers to participate in the rehabilitation process of their children. Services provided include physical therapy, electrical stimulation, special education, speech and language therapy, occupational therapy, psychology, aquatic therapy, and hippotherapy (Asociación de Padres y Compadres, 2013). The main emphasis of therapy at Padres y Compadres is to move children through passive range of motion as a way to facilitate physical improvements. Children are not active participants in their therapy and do not participate in play activities (B. Milani, personal communication, January 31, 2012). The environment at Padres y Compadres is similar to that described by the Disability Rights International (2010) study of institutions in Mexico. While children spend a majority of their day on the Padres y Compadres campus, most of their time is

spent sedentary, lying on mats in an open room with lack of stimulation. Although play is beneficial for facilitating overall development, it is not incorporated into the daily routines of the children with disabilities during their time on campus, not even during therapy sessions. Padres y Compadres values innovation and best-practice, and is always seeking out equipment, techniques or interventions to improve the physical and cognitive conditions of the children served (Asociación de Padres y Compadres, 2013).

Push International, a non-profit humanitarian organization, shares a campus with Padres y Compadres, and provides wheelchairs and walkers to individuals receiving therapy and other community members. The mission of Push International is "to provide mobility and facilitate sustainable development in the disabled community inside the countries where [they] work" (Push International, 2008). Each year, Push International takes groups of U.S. volunteers to Mazatlan to distribute wheelchairs. Push International tailors each outreach trip to the interests of the group, which are most often comprised of occupational and physical therapy student volunteers. This includes an in-service titled "Wheelchairs 101," in which the volunteers learn the parts of a wheelchair and how to adapt wheelchairs to an individual. Other in-services provided include feeding, neurodevelopmental treatment, sensory integration, and hippotherapy. Throughout the week, volunteers work with the children who receive services at Padres y Compadres. Push International expressed a need for a program centered around play to compliment the in-services already provided, and to be used by volunteers while working with the children.

Purpose Statement

The purpose of this project is to provide Push International with a program to be used by

volunteers to implement culturally relevant play activities that support the motor development of children with CP at Padres y Compadres.

Overview of the Project

The project was designed for student volunteers and focused on the use of client-centered, age-appropriate play as a way to motivate children to achieve goals through active engagement; it consisted of three parts: 45 play activity cards, an in-service presented to occupational and physical therapy students in January 2014, and a 50-page reference guide detailing out the information provided during the in-service. The goals of the program were to enhance the volunteers' understanding of the importance of play and provide the children, with whom the volunteers will work with, opportunities for engagement in play to improve their overall occupational performance.

The program was piloted on occupational and physical therapy students from the University of Puget Sound. Pretest and posttest pilot surveys were given to the pilot participants (see Appendix A and B for examples of the surveys), to assess the effectiveness of the program. The final products, a reference guide and accompanying play activity cards, were provided to the Push International staff, who will use the materials to implement a similar in-service with all future student volunteers in Mexico. These students will then use the play program to promote the use of play at Padres y Compadres, to enhance motor development of children. As a result of this project, volunteers will have a greater understanding of how to incorporate play, in a culturally appropriate manner, into the daily routines of the children at Padres y Compadres. Breeana Milani, Director of Service Learning, and Jeff Lair, Program Director, for Push International, were key players in the success of the project. Both Breeana and Jeff are located in the United States and frequently travel to the Padres y Compadres campus. They are familiar

with the staff and families served at Padres y Compadres, and provided important cultural recommendations and feedback throughout the process. Breeana Milani is a registered and licensed pediatric occupational therapist, who emphasized the importance of play for the children at Padres y Compadres, and supported the project. Additional key players included Rita Correa Meraz, the founder and director of Padres y Compadres and Al Fuentes, the cultural liaison.

Final Product

The final product is a 50-page reference guide to be used in conjunction with 45 play activity cards. The reference guide provides a brief overview of CP**,** motor skill development, benefits of play, categories of play, the "just-right" challenge, activity analysis and grading for play, effective positioning for play, and culturally competent health care. The play activity cards are divided into four categories reflecting Nancy Takata's (1974) play epochs: sensorimotor, symbolic and simple constructive, dramatic, complex constructive, and pre-games, and games. The recreation epoch not included in the play activity cards because the demands of the activities did not tend to match well with the abilities of the children at Padres y Compadres. Each play activity card contains the category of play, material suggestions, three motor skills promoted by engagement in the activity, and examples of grading (see Appendix C for a sample of the play activity cards). The play activities are also provided in the form of a spreadsheet (see Appendix D for a sample page of the spreadsheet), which also notes the primary sensory system targeted and the type of play (e.g. solitary, collaborative) elicited from the activity. Toys and materials for each play activity were provided to Padres y Compadres. The final products were delivered to Breeana Milani, via mail, after a meeting to discuss the final project.

Procedure

This project can be replicated by following this subsequent process:

1. Have a personal interest in pediatric and/or international occupational therapy
2. Identify an agency and complete a needs assessment
3. Determine the sections of the reference guide based on research and personal experience
4. Identify play activities that promote motor development, and grade each activity up and down based on activity analysis skills
5. Photograph materials of play activities
6. Obtain photo consents for pictures of children during play activities
7. Layout reference guide and play activity cards
8. Receive feedback from agency and other parties involved
9. Publish the reference guide and play activity cards

The following are skills and knowledge that were developed to implement this project:

1. Knowledge of current research on play and how it is used to foster child development
2. Knowledge of typical motor development
3. Knowledge of the environment at Padres y Compadres
4. Knowledge of the role of occupational therapy in play
5. Knowledge of age-appropriate play
6. Knowledge of positioning children during play
7. Knowledge of culturally relevant play in Mexico
8. Knowledge of equipment and toys currently available at Padres y Compadres
9. Knowledge of what is motivating for children at Padres y Compadres
10. Common precautions while working with children with CP
12. Preferred learning strategies for occupational and physical therapy students

Project Goals and Objectives

The following were goals and objectives of the project.

Goal One

After attending the in-service, student volunteers will have a better understanding of play and how it facilitates motor development.

Objective one. After attending the in-service, student volunteers will be able to indicate at least two benefits of play activities.

Objective two. After attending the in-service, student volunteers will be able to identify three play activities to promote motor development.

Objective three. After attending the in-service, student volunteers will be able to identify one way to grade a play activity up and one way to grade a play activity down to create a "just-right" challenge.

Results. These objectives were assessed through completion of a short survey of occupational and physical therapy student volunteers about their knowledge of play activities. Based on pretest and posttest pilot surveys, goal one and its objectives were met. Ten out of ten participants were able to indicate at least two benefits of play; one participant responded that play "promotes motor development and social interaction." Additionally, all participants identified three play activities to promote motor development and identified one way to grade an activity up and down.

Goal Two

The project will improve the Push International service experience of occupational and physical therapy student volunteers by providing an in-service on culturally-appropriate and client-centered play activities to promote motor development of the children at Padres y Compadres.

Objective one. On a survey given on the last day of the trip, students will rate the in-service as beneficial to their professional growth (see Appendix E for sample post trip survey).

Objective two. On a survey given on the last day of the trip, students will indicate that the use of the play program enhanced the quality of their experiences while working with the children at Padres y Compadres (see Appendix E for sample post trip survey questions).

Results. Pretest and posttest surveys were developed and administered during the piloting of this project. Ten out of ten pilot participants indicated that they would use the play program activities and reference guide while working with the children at Padres y Compadres. Refinement to the survey questions were made and provided to Push International, to include in the current post-trip questionnaire given to all volunteers. The questions are meant to facilitate ongoing assessment of these objectives, and evaluate the outcomes of the in-service and play program (see Appendix E for sample post trip survey questions). These objectives could not be assessed at this time.

Goal Three

Through the implementation of the in-service and play program, children at Padres y Compadres will gain opportunities to play in order to promote motor development.

Objective one. After participating in the in-service, student volunteers will incorporate the play program that promotes motor development into their care of children at Padres y Compadres at least once a day.

Objective two. Push International will maintain the in-service and play program by incorporating it into the agenda of each student volunteer trip that works with the children

at Padres y Compadres.

Results. Push International was provided a self-report assessment in order to continue to evaluate the effectiveness of the play program, and make refinements as needed (see Appendix F for a sample self-report assessment). Blank activity cards were also provided as a format for ongoing development of the play activities. Breeana Milani, Director of Service Learning for Push International, has indicated that the in-service and play program will be included in the curriculum of all future teams. Since the development of this program, Push International has not taken a volunteer trip to Mazatlan, and therefore, goal three and its objectives were unable to be assessed at the time of publication.

Survey Findings

Consistently, pilot participants noted motor and social skills as key benefits of play. Seven out of ten participants self-ranked improved knowledge in areas of CP, play, and motor skills from pretest to posttest pilot surveys. In comparing pretest and posttest pilot surveys, all participants gained confidence in providing play experiences to facilitate development of children at Padres y Compadres. For further consideration, participants wrote the following: “I love the play chart” referring to the spreadsheet in the reference guide (see Appendix D for a sample page of the spreadsheet); “I really like that you included the “just-right” challenge. You said we set children up for success, but I think it’s also important to mention that we give them a safe place to fail;” and “I think it will be an extremely helpful tool for Push [International].” Feedback from pilot participants on specific play activities was incorporated into the finalized play activity cards.

Breeana Milani, of Push International, has expressed interest in ongoing collaboration with the University of Puget Sound, and is welcome to contact the university to discuss further

development or refinement of the play program. Future students may add to the play activities spreadsheet (see Appendix D) and/or the play activity cards (see Appendix C).

Implications for Occupational Therapy

The Ecology of Human Performance model (EHP) is the occupational theory that informed this project. In the EHP model, characteristics of the environment (physical, social, cultural, and temporal) contribute to the context in which an individual engages in a behavior to complete a task; a behavior cannot be understood outside of the context in which it takes place (Dunn, Brown, & McGuigan, 1994). A person is embedded in his/her context, and therefore, the context is "seen" before the person. In the case of this project, the authors took into consideration the physical, social, cultural, and temporal contexts at Padres y Compadres, which influence the activities and behaviors of the children. In the EHP model, the performance range of a client depends on his/her skills and abilities, as well as environmental supports. Supports may be inherent in certain activities or may need to be facilitated. The EHP model recognizes that occupational performance is dynamic and nonlinear (Dunn, Brown, & McGuigan, 1994). In pediatric occupational therapy, the EHP model is used because children are embedded within their family, which is a unique culture. Additionally, the EHP model may be applied to program development outside of one's home country, such as the case with this project. The EHP model guided the implementation of this project to achieve a "goodness of fit" between the children in their context and tasks. The project attempted to increase the children's task performance by establishing motor skills through informing student volunteers about the types of play, the importance of play, and how it can promote motor skill development. The fit between the child, context, and task was emphasized.

The OTPF-II further guided this project. In the OTPF-II, play is one of eight areas of

occupation (AOTA, 2008). Neuromotor dysfunction, such as CP, may interfere with one's ability to participate in play. This interference may be caused by impairments in body functions, body structures, and/or motor and praxis skills (AOTA, 2008). This impairments may hinder a child's ability to play. To address the impact of neuromotor dysfunction, this project used play as a therapeutic tool, and promoted age-appropriate play activities to facilitate motor development. Play is defined by Parham and Fazio (2008) as, "any spontaneous or organized activity that provides enjoyment, entertainment, amuse-ment, or diversion" (p. 448). This project provided a play program with age-appropriate play activities to be used with children who have neuromotor dysfunction, to increase the children's motor and praxis performance skills, and provide a "just-right" challenge. Grading the play activities was necessary to provide each child with the ability to achieve some form of success, while still challenging his/her abilities and sustaining interest in the activity. Engagement in play activities was aimed at encouraging active participation and improvement in motor skills, which may allow for an increase in overall occupational performance for the children. Active participation in play activities provided the children with the opportunity to explore and learn about their environments leading to the acquisition of additional performance skills. In turn, increased performance skills have the potential to further increase the quality of life of the children and potentially increase their independence in other areas of occupation. Occupational therapists have an essential part in educating individuals involved in caring for children with disabilities about the importance of play and how to facilitate appropriate play activities. This project provided occupational and physical therapy students with a tool for engaging children in play activities to increase motor skills, within the context of performance skills. The desired outcome was to provide the opportunity to develop motor skills for children with neuromotor dysfunction, through the use of age-appropriate play

activities.

Special Circumstances and Considerations

In developing this project, it was important to consider cultural differences between the United States and Mexico. The authors wanted to ensure a culturally competent project and opportunities for the student volunteers to grow in their cultural sensitivity and understanding. Careful selection of culturally inclusive language and culturally appropriate toys and play activities safeguarded against imposing American ideals onto the play concepts and children in Mexico. Additionally, the experience level of the future student volunteers was taken into consideration. The program was geared toward graduate-level student volunteers, who may have a range of experience working with children and/or travel outside of the United States. The culture of the student volunteers, as well as the culture of Push International and Padres y Compadres, were considered when creating this project.

The culture of Push International and Padres y Compadres is informal and fluid; the rhythm of the day is driven by preparing and serving breakfast and lunch to the children. Therefore, the play program needed to fit into the daily routine of the Push International volunteers, dictated by the routines of the children at Padres y Compadres. The social, temporal, and physical environments were considered during the creation of the project.

In addition, it was important to consider the staffing at Push International and Padres y Compadres. Both are non-profit organizations, with many demands placed on the time of the staff members. Therefore, this project was designed with ease of implementation in mind. Rita Correa Meraz and Breeana Milani, who have held their current positions for over five years, and have committed to the continuation of the play program at Padres y Compadres.

Future Considerations

The play program has room to expand in the future. The activities cards were designed to offer an easy and accessible way to select play opportunities for the children at Padres y Compadres, but also as a starting point for future creativity. Play activities may be added to the program as future volunteers discover motivating and meaningful play activities for the children. Sustainability of the play program is guaranteed, as Breeana Milani will implement the in-service and offer the use of the play program with all future occupational and physical therapy student volunteer groups. The program may also be used by other volunteers who may have less knowledge about age appropriate play and less experience working with children with disabilities. Additionally, the program could be expanded for use with the staff and caregivers at Padres y Compadres. Originally, this project was intended to be an in-service for the caregivers of the children at Padres y Compadres. However, given the current travel warning by the United States State Department, the authors were unable to travel to Mexico and provide the in-service to the staff and caregivers. Therefore, the direction of the project shifted toward occupational and physical therapy student volunteers in the United States. Breeana Milani has expressed interest in inviting staff and caregivers of Padres y Compadres to attend future in-service presentations and work with student volunteers to implement the play program. Finally, Push International volunteers may benefit from similar in-services and programs addressing other topics relevant to working with individuals with disabilities in Mexico.

Appendix A - Pretest Pilot Survey

Presentation and Play Lab Pre-Test Date: _____
Participant #: _____
Presenters: Leslie Coonc and Sonia Nurkse

Please circle one response for each statement.

I understand the etiology of cerebral palsy and the various levels of involvement.	Yes	Slightly	No
I understand that play is a useful medium for motor development.	Yes	Slightly	No
I understand the difference between play and playfulness.	Yes	Slightly	No
I feel confident in assisting a child with cerebral palsy in participating in play activities to promote motor development.	Yes	Slightly	No
I feel confident in selecting appropriate play activities for a child with cerebral palsy.	Yes	Slightly	No
I feel confident in grading play activities up and down to reach the just right challenge for a child with cerebral palsy.	Yes	Slightly	No
I feel confident in providing play experiences to facilitate development to children at Padres y Compadres.	Yes	Slightly	No

Please check the correct one:
___First Year Occupational Therapy Student
___Second Year Occupational Therapy Student
___First Year Physical Therapy Student
___Second Year Physical Therapy Student
___Other, please specify:_____

Presentation and Play Lab Post-Test Date: _____
Participant #: _____
Presenters: Leslie Coonc and Sonia Nurkse

Please circle one response for each statement.

I understand the etiology of cerebral palsy and the various levels of involvement.	Yes	Slightly	No
I understand the etiology of cerebral palsy and the various levels of involvement.	Yes	Slightly	No
I understand that play is a useful medium for motor development.	Yes	Slightly	No
I understand the difference between play and playfulness.	Yes	Slightly	No
I feel confident in assisting a child with cerebral palsy in participating in play activities to promote motor development.	Yes	Slightly	No
I feel confident in selecting appropriate play activities for a child with cerebral palsy.	Yes	Slightly	No
I feel confident in grading play activities up and down to reach the just right challenge for a child with cerebral palsy.	Yes	Slightly	No
I feel confident in providing play experiences to facilitate development to children at Padres y Compadres.	Yes	Slightly	No
I feel that this presentation should be included in future Push International trips. Please Explain.	Yes		No
I feel that the play program should be implemented by future Push International teams. Please Explain.	Yes		No
I would use the reference guide with the information from the presentation to prepare for working with the children at Padres y Compadres.	Yes		No
I would want to receive a PDF version of the reference guide before arriving in Mexico.	Yes		No

Please describe any changes to the presentation you feel are necessary.

Please describe any changes to the play program you feel are necessary.

Please list two benefits of play that you learned from this training.

1.

2.

Please list three play activities that may be used to facilitate motor development of a child with cerebral palsy.

1.

2.

3.

From the three play activities you listed above, please list one way to grade the activity up and one way to grade the activity down.

Grade up example:

Grade down example:

Is there anything else you feel we should consider?

Appendix C - Sample of Play Activity Cards

Gato — Games

Materials: wooden gato board, bean bags

Promotes: - upper extremity ROM - motor control - grasp and release

Grading Down: have child sit or use two hands to throw; drop bean bags into board

Grading Up: have child toss bean bags from a distance toward the board

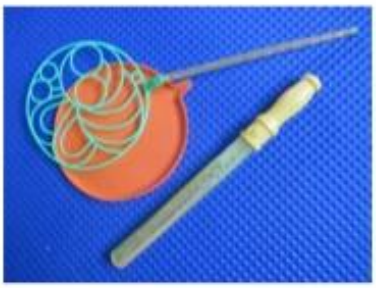
Bubbles — Sensorimotor

Materials: bubbles, bubble wand

Promotes: - upper extremity ROM - motor planning - motor control

Grading Down: have child pop bubbles while you blow them

Grading Up: use large bubble wand which requires fast and coordinated arm movements to create a bubble



Appendix D - Sample of Play Activities Spreadsheet

KEY
Stage of Play - S: Solitary, P: Parallel, A: Associative, C: Cooperative
Primary System Targeted - P: Proprioceptive, T: Tactile, V: Vestibular
See Glossary for definition of terms.

Sensorimotor Epoch Activities

Index #	Play Activity	Materials*	Promotes**	Promotes**	Promotes**	Stage of Play	Primary System Targeted
1	Bean Bag Toss	swing, bean bags, bucket(s)/large orange disc as target	gross grasp	grasp and release	upper extremity range of motion	A	V
2	Bubbles	bubbles, bubble wand	upper extremity range of motion	motor planning	motor control	S	P

Symbolic and Simple Constructive Epoch Activities

Index #	Play Activity	Materials*	Promotes**	Promotes**	Promotes**	Stage of Play	Primary System Targeted
7	Feed the Monster	monster (jar with hole in lid), coins, rubber animals	pincer grasp	grasp and release	object manipulation	S	T
8	Playing Music	tambourine (pandereta), castanets (castañuelas), maracas	gross grasp	hand strengthening	disassociation of left and right	S	T

Dramatic and Complex Constructive and Pre-Game Epoch Activities

Index #	Play Activity	Materials*	Promotes**	Promotes**	Promotes**	Stage of Play	Primary System Targeted
31	Balloon Volleyball	a balloon	balance	reaching	equilibrium reactions	C	V
32	Beach Ball Soccer	beach ball	balance	core strength	motor control	C	V
33	Kerplunk	Kerplunk (container, dowels, and tennis balls)	motor control	grasp and release	hand-eye coordination	C	T

* All materials listed are available at Padres y Compadres. If they are not available for some reason, alternative materials may be substituded so the child can participate in the activity.

** Primary skills listed are not inclusive; additional skills may be promoted through engagement in the activity. Additional skills may be addressed by adapting or grading the activity.

Appendix E - Sample of Push International Post-Survey Questions to Measure Objectives One and Two of Goal One

The following questions were suggested to Breeana Milani, Director of Service Learning for Push International, as part of the post trip survey given to all volunteers.

1. Please describe how the in-service on play did or did not contribute to your professional growth.
2. Please describe how the use of the play program did or did not enhance your experience working with the children at Padres y Compadres.

Appendix F - Sample Self-Report Assessment of Usefulness of Play Program

Play In-Service and Play Program Data Sheet for May 2014 - May 2015

Date of Trip:

Was the in-service on play presented to volunteers? Yes or No

If no, what were the barriers preventing the presentation of the in-service on play?

Was the Play Program used during the trip? Yes or No

If no, what were the barriers preventing the use of the play program?

Was the Play Program used at least once per day while volunteers worked with the children? Yes or No

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Total Number of Trips From May 2014-May 2015:

Total Number of Play In-Services Presented From May 2014-May 2015:

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